

WHAT IS CLAIMED IS:

1. A sunroof panel for an opening, the sunroof panel adapted to fit a dimension of the opening, said sunroof panel comprising:

a phosphorescent material; and

a light-transparent component.

2. The sunroof panel according to Claim 1, wherein the light-transparent component transmits light having wavelengths of about 200 nm to about 800 nanometers.

3. The sunroof panel according to claim 1, wherein the light transparent component transmits light having wavelengths of about 300 to about 750 nanometers.

4. The sunroof panel according to Claim 1, wherein the phosphorescent material is dispersed within a matrix of the light-transparent component.

5. The sunroof panel according to Claim 1, wherein the phosphorescent material is disposed on at least one surface of the light-transparent component.

6. The sunroof panel according to Claim 1, wherein the phosphorescent material comprises a non-oxide phosphor, an oxide phosphor, or a combination comprising at least one of the foregoing phosphors.

7. The sunroof panel according to Claim 6, wherein the non-oxide phosphor is selected from a group consisting of zinc sulfide, zinc sulfide doped with a transition metal, and zinc sulfide doped with a rare earth metal.

8. The sunroof panel according to Claim 6, wherein the oxide phosphor is selected from a group consisting of an oxide ceramic phosphor, an oxide ceramic phosphor doped with an alkaline earth metal, and an oxide ceramic phosphor doped with a rare earth metal.

9. The sunroof panel according to Claim 1, wherein the phosphorescent material comprises an alkaline-earth metal oxide aluminate.

10. The sunroof panel according to Claim 1, wherein the phosphorescent material forms a pattern on or in the light transparent component.

11. The sunroof panel according to Claim 1, wherein the opening is formed in a vehicle roof portion.

12. The sunroof panel according to Claim 1, wherein the phosphorescent material provides a glow light discharge for a period of time upon exposure to radiant energy.

13. A vehicle sunroof assembly, comprising:
a vehicle roof portion having at least one opening, said opening extending between an interior portion and an exterior portion of the vehicle roof portion; and
a sunroof panel adapted to fit the at least one opening, said panel comprising a phosphorescent material and a light-transparent component.

14. The vehicle sunroof assembly according to Claim 13, wherein the phosphorescent material is dispersed within a matrix of the light-transparent component.

15. The vehicle sunroof assembly according to Claim 13, wherein the phosphorescent material is disposed on at least one surface of the light-transparent component.

16. The vehicle sunroof assembly according to Claim 13, wherein the phosphorescent material comprises a non-oxide phosphor, an oxide phosphor, or a combination comprising at least one of the foregoing phosphorescent materials.

17. The vehicle sunroof assembly according to Claim 16, wherein the non-oxide phosphor is selected from a group consisting of zinc sulfide, zinc sulfide doped with a transition metal, and zinc sulfide doped with a rare earth metal.

18. The vehicle sunroof assembly according to Claim 16, wherein the oxide phosphor is selected from a group consisting of an oxide ceramic phosphor, an oxide ceramic phosphor doped with an alkaline earth metal, and an oxide ceramic phosphor doped with a rare earth metal.

19. A method for providing light into an interior of a vehicle, comprising:

exposing a panel disposed in an opening of the vehicle to an external light source, wherein the panel comprises a phosphorescent material and a light-transparent component;

absorbing radiant energy from the external light source to excite electrons in the phosphorescent material; and
emitting visible light from the phosphorescent material and into the interior portion of the vehicle upon exposure to the external light source or upon discontinuation of the external light source.

20. The method according to Claim 19, further comprising diffusing the radiant energy produced from the external light source with the phosphorescent material to reduce radiation and heat load into the vehicle.